

David Graham, EPI Building Analyst

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## Home Energy Audit: A Definition for Clarity

House Energy &  
Technology Committee

June 3, 2014



## Michigan Energy Efficiency Contractors Association

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Created to support our Core Members:

Companies that design, recommend, install or  
evaluate energy efficiency solutions in  
Michigan's residential, commercial, industrial  
and agricultural buildings.



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## MEECA's Core Purpose

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To advocate that Michigan has the most *robust,*  
*reliable, qualified* and *predictable* energy  
efficiency industry in the nation.



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## Support HB5397

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- Unanimous Member Support
- Testified on March 11, 2014



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## Confusion in the Market

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Audit

Consultation

Evaluation

Assessment



Inspection

Walkthrough

Survey



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## Consumer Protection

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## Provide Necessary Assurances

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- Municipal involvement sets a high bar
- Integrity throughout the process
- Funder confidence
- Validate results

HOLLAND  
Board of Public Works



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## Key Components

### 1. Qualified Person

- Required Training Programs

### 2. Building Performance Equipment

- Thermal Imaging Cameras
- Manometer
- Blower Door
- CO Testers



Fluke Ti45

### 3. Nationally Approved

### 4. Health, Safety & Durability

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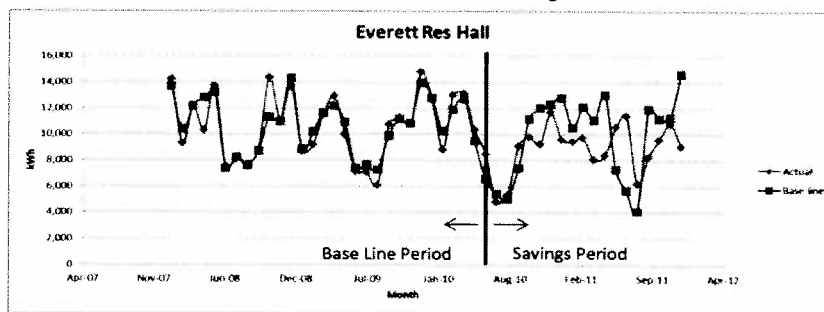


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## Additional Concerns

### Energy Baseline & Cost Benefit Analysis

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Source: Developing an Accurate Baseline for Electricity Consumption, Focusing on University Residence Halls



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## Example Baseline Formula

$$\left| \frac{HDD}{C1} + \frac{CDD}{C2} + \frac{AWS}{C3} + \frac{CP}{C4} + \frac{HDL}{C5} + \frac{OCC}{C6} \right| = Trend Unit$$

HDD = Heating Degree Days

CP = Cloud Points

CDD = Cooling Degree Days

HDL = Hours of Daylight

AWS = Average Wind Speed

OCC = Occupancy

C = Constant

Source: Developing an Accurate Baseline for Electricity Consumption, Focusing on University Residence Halls



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## Why American National Standards Institute (ANSI)?

- A vetted process to approve standards
- Highest bar for industry standards
- Three national industry organizations
  1. Air Conditioning Contractors of America (ACCA)
  2. Building Performance Institute (BPI)
  3. Residential Energy Services Network (RESNET)



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## ANSI Approved Standards

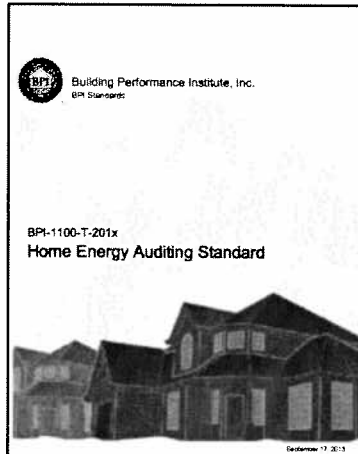
- **ACCA Standard:**  
Standard 12 ANSI/ACCA 12 QH – 2011  
Existing Home Evaluation and Performance Improvement
- **BPI Standards:**  
BPI-1100-T-201x  
Home Energy Auditing Standard  
BPI- 2400-S-2012  
Standard Practice for Standardized Qualification of Whole House Energy Savings Prediction by Calibration to Energy Use History (The Delta Standard)
- **RESNET Standard:**  
700 RESNET  
National Standard for Home Energy Audits



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## Industry Consensus

- Meet MEECA's key components
- Referenced by
  - Each other
  - U.S. Dept. of Energy
    - ENERGY STAR®
    - Home Energy Score
  - Michigan Saves
  - Consumers Energy
    - Home Performance with Energy Star



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## Issuance of a Report

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- Listing of energy assets
- Recommendations to improve energy performance
- Recommendation to safeguard health & safety
- Baseline energy model
  - Using approved energy model software
- Cost benefit analysis for proposed upgrades



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## Questions?



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